AMENDMENTS TO THE SPECIFICATION:

Please amend the paragraph beginning at page 1, line 2, as follows:

~~INTRODUCTION~~

FIELD OF THE INVENTION

DESCRIPTION OF THE PRIOR ART

Gas-sensitive field-effect (GasFETs) devices have been studied for about 25 years. The replacement of the MOSFET gate by materials having catalytic properties (Pt, Pd, Ir...) allows the detection of several gases. During the years, they have shown to be suitable for different applications such as hydrogen ~~monitor~~ monitoring and leak detectors and electronic noses. Portable instruments and automotive industry are markets where low-cost and low-power consumption devices are in constant development. During the last years, a lot of work has been done in the gas sensing field on reducing the power consumption of resistive gas sensors devices, but none has been reported on MOSFET type gas sensors. They are when used usually heated to a temperature over 100°C to increase sensitivity and are limited to 175-200°C due to the use of standard silicon fabrication technologies. The present power consumption for one sensor is about 0.5 to 1.0 W, a major part of which is used to heat the sensor to its working temperature. A low-power consumption array of GasFETs has been developed to make this technology competitive with the others on these markets.

Please amend the paragraph heading at page 1, line 21, as follows:

SUMMARY OF THE INVENTION

Please amend the paragraph beginning at page 2, line 15, as follows:

~~EMBODIMENT~~ DESCRIPTION OF THE DRAWINGS

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Further advantages and developments of the invention are apparent from the claims as well as from the following description of an embodiment with reference to the drawings, wherein: ~~Fig. 1 in the drawings depicting a cross section of an embodiment of the invention, it should be noted that the cross section is very much enlarged and not to scale since the dimensions in the vertical direction (as viewed) is enlarged many times more than the horizontal direction for improved illustration. Fig. 2 shows a similar device somewhat simplified and fabricated in accordance with claim 13. Fig. 3 illustrates yet another way to fabricate a micro-hotplate, this time in accordance with claim 15. In fig 4 a micro-hotplate made in accordance with claim 16 as shown. Fig. 5 is a cross section of a device similar to fig 1, but where the sensor is contactable by for instance ambient gas in a more direct manner.~~

Fig. 1 depicts a cross section of an embodiment of the invention, in which the cross section is very much enlarged and not to scale since the dimensions in the vertical direction (as viewed) is enlarged many times more than the horizontal direction for improved illustration.

Fig. 2 shows a similar device somewhat simplified and fabricated in accordance with one aspect of the invention;

Fig. 3 illustrates yet another way to fabricate a micro-hotplate, in accordance with another aspect of the invention;

Fig. 4 shows a micro-hotplate made in accordance with yet another aspect of the invention; and

Fig. 5 is a cross section of a device similar to Fig. 1, but where the sensor is contactable by for instance ambient gas in a more direct manner.

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Please amend the paragraph beginning at page 2, line 27, as follows:

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Sensor chip

The MOSFETs array gas sensor realized (~~fig~~ Fig. 1) has been designed in the aim of reducing the source and drain leakage currents and the power consumption of this type of gas sensors. Each device consists of 4 GasFETs, a temperature sensor (diode) and a heater. The actual chip size is 4.0 x 4.0 mm^2.

Please amend the paragraph beginning at page 3, line 1, as follows:

Electronic components

The heater is a semiconducting resistor, which is made during the p-well implantation of the MOSFET fabrication process. The transistors (NMOS) and the diode temperature sensor are made in a single diffusion step of doping atoms from CVD oxide films. Arrays with 4 medium or small MOSFETs have been designed respectively with a channel length of 13.0 and 5.0 μm. The fabrication of NMOS transistors in a p-well technology allows to drive them separately. Their source/drain leakage currents have been limited by minimizing the p-n junction surface at the source and the drain regions. ~~Therefor,~~ Therefore, the metal/semiconductor contacts are directly taken on the source and the drain just beside the gate. GasFETs operate with their drain and gate connected together with a constant current bias between the source and the drain. In this design, the drain and gate were not connected together to allow more flexibility during the characterization of the MOSFETs electrical properties.

Please amend the paragraph beginning at page 3, line 23, as follows:

FABRICATION

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Three main parts compose the fabrication process:

1. Fabrication of the doped regions in the silicon to make the electronic components;

2. Gate oxide growth and deposition of the membrane, the metallization, and passivation films; and

3. Release of the membrane and the formation of the silicon island by for instance [[wt]] wet anisotropic etching of silicon.

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